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Biomechanical assessment of outputs of surgical treatment of patients with complex fragments of lower limbs

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Abstract

© Published under licence by IOP Publishing Ltd. Studies of static-dynamic disorders, with the use of new, progressive technologies in the post-traumatic period becoming increasingly practical. We conducted studies of the support, dynamic function of the lower limbs, balance in a vertical rack in 20 healthy individuals (comparison group) in order to determine the normal values of the biomechanical research indices. Of all studied women 12, men 8. All subjects were of working age (25-55 years). The median age was 40 years. Of particular interest are data from biomechanical studies of the support, dynamic function of the lower extremities, sensory balance, conducted in 18 patients with fractures of the joint region of the lower leg bones in the dynamics at terms 9-12 and 18-24 months after the operation. In the study of the balance, there were found disturbances in the influence of the somatosensory, visual and vestibular systems on maintaining the balance of the body. Each balance study included a series of open and closed eyelids in a vertical patient stand with lower limbs straight in the knee joints on hard and soft (foamy) surfaces. The application of the hardware-software evaluation of the support-dynamic function of the lower extremities by the type of stabilometry at the rehabilitation stages will allow to identify and carry out the prevention of serious post-traumatic complications at an early stage of the disease.

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